

Answer on Question #57348 – Math – Analytic Geometry

Question

- 1) Which conic section does the equation below describe?

$$(x + 1)^2 + (y - 3)^2 = 4$$

- A: Parabola
- B: Ellipse
- C: Circle
- D: Hyperbola

Solution

Canonical equation for circle is $(x - x_0)^2 + (y - y_0)^2 = R^2$, hence equation $(x + 1)^2 + (y - 3)^2 = 4$ describes a circle.

Answer: C Circle.

Question

- 2) Which conic section does the equation below describe?

$$(y - 2)^2 = 12(x + 7)$$

- A: Ellipse
- B: Hyperbola
- C: Circle
- D: Parabola

Solution

Canonical equation for parabola is $y'^2 = 2px'$, where $y' = y - 2, x' = x + 7$, hence $(y - 2)^2 = 12(x + 7)$ describes a parabola.

Answer: D Parabola.